

Claims

- [c1] We claim:
1. A method for controlling flow of gases through a passage between an engine crankcase and an engine intake manifold, the method comprising:
- controlling* decreasing a flow of gases through the passage between the crankcase and the intake manifold when a temperature of the gases is greater than a predetermined temperature. *below*
- [c2] 2. The method of claim 1 wherein the step of decreasing the flow of gases through the passage includes restricting a flow path of the gases when said temperature is greater than said predetermined temperature.
- [c3] 3. A method for controlling flow of gases through a passage between an engine crankcase and an engine intake manifold, the method comprising:
- controlling a flow of gases through the passage between the crankcase and the intake manifold when a temperature of the gases is less than a predetermined temperature; and,
- decreasing said flow of gases through the passage when said temperature of the gases is greater than a predetermined temperature.
- [c4] 4. A valve assembly for controlling flow of gases through a passage between an engine crankcase and an engine intake manifold, comprising:
- a housing configured to be coupled with the passage; and,
- a flow control device disposed in said housing, said device decreasing a flow of said gases through said housing when a temperature of said gases is greater than a predetermined temperature.
- [c5] 5. The valve assembly of claim 4 wherein said housing includes an inlet aperture communicating gases from said passage into said housing, wherein said flow control device includes:
- a piston configured to move adjacent said inlet aperture; and,
- an actuator coupled to said piston, said actuator moving said piston to restrict flow of said gases through said aperture when said temperature of said gases is greater than said predetermined temperature.

[c6] 6.The valve assembly of claim 5 wherein said actuator comprises one of a wax motor, a bi-metallic actuator, or an electrically actuated solenoid.

[c7] 7.The valve assembly of claim 4 further comprising a vacuum actuated pintle disposed downstream of said flow control device, said flow control device comprising:
a sleeve member configured to be concentrically received around a portion of said pintle when said sleeve is moved to a first axial position to restrict flow of gases through said housing; and,
an actuator coupled to said sleeve, said actuator moving said sleeve toward said first axial position when said temperature of said gases is greater than said predetermined temperature.

[c8] 8.The valve assembly of claim 7 wherein said actuator comprises one of a wax motor, a bi-metallic actuator, or an electrically actuated solenoid.

[c9] 9.A control system for controlling flow of gases through a passage between an engine crankcase and an engine intake manifold, the system comprising:
a temperature sensor generating a first signal indicative of a temperature of said engine;
a valve assembly having a housing and a flow control device disposed in said housing, said housing being configured to be coupled with the passage, said flow control device being configured to decrease a flow of said gases through said housing responsive to a second signal; and,
a controller operably connected to said temperature sensor and said valve assembly, said controller generating said second signal when said first signal indicates said temperature is above a predetermined temperature.

[c10] 10.The system of claim 9 wherein said temperature comprises one of a temperature of gases communicating with said valve assembly, an engine oil temperature, an engine coolant temperature, and an engine block temperature.